

WAUKESHA WATER UTILITY
WAUKESHA, WISCONSIN

Great Water Alliance
Contract Package 6 Return Flow Pipeline, 18-Inch Sanitary Sewer, and Outfall Facilities

Addendum No. 2

April 23, 2020

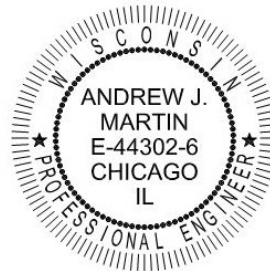
Greeley and Hansen LLC

Dear Bidder:

Bidders for the above-named project are hereby notified that the following addenda are made to the Contract Documents. Conform bids to be received by 10:00 AM local time May 14, 2020 to this Addendum. Annotate Section 00 41 00 Bid Form, Article 3, Paragraph 3.01 to indicate receipt of this Addendum.

Download this Addendum from QuestCDN at www.questcdn.com. In your QuestCDN account, under 'Projects', enter the QuestCDN project number #6923865. Select the project to open the 'Bid Advertisement' page. At the top of the page, options are listed on the functions bar. Select 'Download Addenda' to enable the download of all addenda documents (PDF/Zip file format). Bid documents must be downloaded prior to downloading the addenda.

Date: 3/26/2020



Expiration Date:
7/31/2020

ADDENDUM NO. 2

April 23, 2020

GENERAL

The following general contractors were present at the April 14, 2020, mandatory Pre-bid Conference and are eligible to bid on the project:

- | | |
|-----------------------------------|----------------------------------|
| 1. Advance Construction, Inc. | 7. Michels Corporation |
| 2. DF Tomasini Contractors, Inc. | 8. PTS Contractors, Inc. |
| 3. Dorner, Inc. | 9. S.J. Louis Construction, Inc. |
| 4. Garney Companies, Inc. | 10. Super Excavators, Inc. |
| 5. Globe Contractors, Inc. | 11. Walsh/Benchmark JV |
| 6. Joel Kennedy Constructing Corp | |

The following other entities were also present at the Pre-bid Conference:

- | | |
|--------------------------------------|-------------------------------|
| 1. American Pipe | 9. Next Electric LLC |
| 2. Bore Master, Inc. | 10. P.J. Kortens and Company |
| 3. Core & Main | 11. Security Officer Services |
| 4. Ferguson Enterprises | 12. Thompson Pipe Group |
| 5. Gabe's Directional Drilling, Inc. | 13. Tyler Union |
| 6. McWane Ductile | 14. United Rentals |
| 7. Mid City Corporation | 15. U.S. Pipe |
| 8. MJM Trucking LLC | |

Attachment No. 1 includes a memorandum, which summarizes the verbal comments from the April 14, 2020, Pre-bid Conference.

The Plan Holders List as of April 17, 2020 is as follows:

- | | |
|---------------------------------------|--------------------------------------------------|
| 1. American Cast Iron Pipe Company | 16. UPI Construction LLC |
| 2. Walsh Construction Company II, LLC | 17. Thompson Pipe Group -Pressure |
| 3. Crane Engineering Sales, Inc | 18. Push, Inc. |
| 4. NEXT Electric, LLC | 19. Northern Dewatering Inc. |
| 5. Garney Companies, Inc. | 20. Dodge Data & Analytics Next
Member Number |
| 6. Mid City Corporation | 21. United Piping |
| 7. Mastec na twin cities | 22. PTS Contractors, Inc |
| 8. PJKortens and Co | 23. Super Excavators, Inc. |
| 9. Gabe's Directional Drilling | 24. Concrete Industries |
| 10. Etna Supply | 25. Ferguson Waterworks - Pewaukee |
| 11. Hobas Pipe USA | 26. Dorner Inc. |
| 12. E J M Pipe Services | 27. Joel Kennedy Constructing Corp |
| 13. Benchmark Construction | 28. Payne & Dolan, Inc. |
| 14. MJ Construction, Inc. | 29. Black & Veatch - Milwaukee, WI |
| 15. Hogen Electric, Inc. | 30. RJ Underground Inc |

31. August Winter & Sons, Inc
 32. United Rentals Trench Safety
 Wisconsin
 33. IOWA TRENCHLESS
 34. Horizontal Boring & Tunneling
 Co.
 35. DF Tomasini Contractors, Inc.
 36. Globe Contractors, Inc.
 37. CORE AND MAIN

38. Advance Construction Inc.
 39. The Driller, LLC
 40. Peterson and Matz, Inc.
 41. Construct Connect
 42. Pieper Power - Milwaukee
 43. ISCO2
 44. Michels Corporation
 45. US Pipe
 46. S.J. Louis Construction, Inc.

All bidders are hereby notified of the following revisions:

SPECIFICATIONS

- Volume I of II, Division 0, Section 00 41 00 Bid Form, Article 6 Basis of Bid, Bid Alternate No. 1, Page 00 41 00-28:

Delete:

CONTRACT ITEM		UNIT	ESTIMATED QUANTITY
8	Blow-Off Assemblies (Contract Item No. 8 for CP5 and CP6)	EA	22

and replace with:

CONTRACT ITEM		UNIT	ESTIMATED QUANTITY
8	Blow-Off Assemblies (Contract Item No. 8 for CP5 and CP6)	EA	21

The updated bid worksheet can be accessed from your QuestCDN account as follows: Select the QuestCDN project number #6923865; at the top of the page in your account, options are listed on the functions bar; Select 'Online Bidding' and enter your login information for the QuestCDN VirtuBid page; Select the 'Bid Worksheet' to access the new worksheet. The worksheet can be downloaded using the 'Export to CSV' option or filled out without downloading the file.

- Volume II of II, Division 33, Section 33 05 23 Jacking, Augering and Mining, Paragraph 3.1.J Grout Annular Space, Page 33 05 55-8:

Add the following sentence under Subparagraph J.3:

“Where venting is required or recommended by the manufacturer, vent and fill pipes on brick ends as an acceptable alternative to end seals. Cutting holes in steel casings will not be permitted.”

3. Volume II of II, Division 33, Section 33 05 52 Buried Fiberglass Reinforced Plastic Pipe and Fittings, Paragraph 2.3 Manufacture, Page 33 05 52-3:

Under Subparagraph B, second sentence, delete “92” and replace with “90”.

Under Subparagraph C, delete the second sentence and replace with the following: “Furnish interior surface of the pipe exposed to sewer flow with a nominal liner thickness of 40 mils.”

4. Volume II of II, Division 33, Section 33 05 55 Buried Ductile Iron Pipe and Fittings, Paragraph 2.1 Manufacturers, Page 33 05 55-4:

Under Subparagraph A.3. Ductile iron mechanical joint fittings, add:

- c. Tyler Union

5. Volume II of II, Division 40, Section 40 05 20 Valves:

Under Paragraph 2.1.A.4 Air Valves, Page 40 05 20-4 add:

- f. International Valve

Under Paragraph 2.7.B.1.b Valve Bodies, Page 40 05 20-8 add “Type 304 Stainless Steel”.

APPENDIX

6. Book I of II, Appendix I:

Update name of boring 6011 to RF-B-39A, boring 6012 to RF-B-041A, boring 6013 to RF-B-53, boring 6014 to RF-B-54, boring 6015 to RF-B-55, and boring 6016 to RF-B-56.

Add the attached boring logs after CC-B-069, Page 142:

RF-B-039A (3 pages)	CC-B-005A (2 pages)
RF-B-041A (2 pages)	CC-B-016A (2 pages)
RF-B-49	CC-B-017A (2 pages)
RF-B-50	CC-B-021A (3 pages)
RF-B-51	CC-B-050A (2 pages)
RF-B-52	CC-B-050B (2 pages)
RF-B-53	CC-B-056A (2 pages)
RF-B-54	CC-B-057B (2 pages)
RF-B-55	CC-B-064A
RF-B-56	




DRAWINGS

7. Delete Note 1 on Drawing C122 and replace it with, “If pavement is disturbed between STA 3136+00 and 3138+50, complete pavement restoration to the median. This restoration, including






excavation, pavement, base course, and other appurtenant work, is incidental to existing contract items as specified in Section 01 29 00 Measurement and Payment.”




8. Delete “Steel Casing Pipe Inside Diameter” on Drawing C302 in the Steel Casing Pipe Schedule and replace with “Steel Casing Pipe Nominal Diameter”.



- END OF ADDENDUM -






PROJECT NAME Great Water Alliance				BORING LOG		 		BORING No RF-B-039A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		PAGE No 1 of 3		HORIZONTAL DATUM NAD 27	
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No		DATE COMPLETED 4/30/19		LATITUDE		VERTICAL DATUM NGVD 29	
DRILLING CONTRACTOR GESTRA		DRILLING CONTRACTOR PROJECT No		BORING OFFSET		LONGITUDE			
CREW CHIEF A. Woerpel		DRILLING RIG CME 75		ROADWAY NAME 60th Street		NORTHING 324375			
FIELD LOG BY D. Harris		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		STATION		EASTING 2538681			
LOG QC BY B. Broback		HAMMER TYPE Auto		EFFICIENCY 90%		OFFSET			
COUNTY		TOWNSHIP		RANGE		SECTION		SURFACE ELEVATION 696 ft	




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	14	2 8 6	14		695	Asphalt Pavement (6"± Thick)									
						Aggregate Base, Gray Crushed Stone, Moist (2"± Thick)								6	
2 SS	15	4 4 5	9			Possible Fill, Brown and Gray Silty Fine Sand, Very Moist to Wet								19	
3 SS	5	50/5"	R	5			SM							21	
					690										
4 SS	18	3 3 9	12			Brown Lean Clay, Trace Sand and Gravel, Moist	CL			4.5+	5.36			16	
5 SS	18	3 3 9	12	10	685	Gray Lean Clay, Trace to With Sand and Gravel, With Silt Lenses, Silty Fine Sand Seams, and Medium Sand Seams, Trace Brown Mottling, Moist to Wet				3.75				16	
6 SS	15	3 3 9	12							4.5+	6.18			14	
7 SS	18	3 3 11	14	15	680					4.5+	5.36			15	
8 SS	14	7 7 9	16				CL			4.25				13	
9 SS	17	3 3 11	14	20	675									16	
10 SS	18	3 3 9	12							2.75	3.05			16	
					25										


WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING:	4ft.		CAVE DEPTH AT COMPLETION: NE	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION:	28ft.		CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS:	N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					

PROJECT NAME Great Water Alliance		 BORING LOG		 		BORING No RF-B-039A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		PAGE No 2 of 3	
CONSULTANT Greeley-Hansen		DATE COMPLETED 4/30/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29	
DRILLING CONTRACTOR GESTRA		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		ROADWAY NAME 60th Street		LATITUDE	
CREW CHIEF A. Woerpel		BORING OFFSET		LONGITUDE		NORTHING 324375	
FIELD LOG BY D. Harris		HAMMER TYPE Auto		EFFICIENCY 90%		EASTING 2538681	
LOG QC BY B. Broback		TOWNSHIP		RANGE		SECTION	
COUNTY		1/4 SECTION		1/4 SECTION		SURFACE ELEVATION 696 ft	

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
11 ST	24				670	Gray Lean Clay, Trace to With Sand and Gravel, With Silt Lenses, Silty Fine Sand Seams, and Medium Sand Seams, Trace Brown Mottling, Moist to Wet	CL			1.5					Qu = 1.35 tsf
12 SS	18	4 4 5	9							1.75	1.73			17	
13 SS	18	3 4 6	10	30	665					3.5	3.63			17	
14 SS	18	4 5 6	11							2.25	2.39			11	
15 SS	18	4 7 7	14	35	660					2.5	2.72			15	
16 SS	0	13 19 20	39												
17 SS	18	6 10 13	23	40	655									17	
18 SS	18	7 7 9	16											17	
19 SS	18	4 5 8	13	45	650					3.5	3.79			18	
20 SS	18	7 9 13	22							3.25	3.63			18	
				50											






WATER & CAVE-IN OBSERVATION DATA			
	WATER ENCOUNTERED DURING DRILLING: 4ft.		CAVE DEPTH AT COMPLETION: NE
	WATER LEVEL AT COMPLETION: 28ft.		CAVE DEPTH AFTER 0 HOURS: N/A
	WATER LEVEL AFTER 0 HOURS: N/A	NE = Not Encountered; NMR = No Measurement Recorded	
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.			

PROJECT NAME Great Water Alliance		 BORING LOG  		BORING No RF-B-039A	
PROJECT No 00521741		CONSULTANT PROJECT No		PAGE No 3 of 3	
CONSULTANT Greeley-Hansen		DATE STARTED 4/30/19		HORIZONTAL DATUM NAD 27	
DRILLING CONTRACTOR GESTRA		DATE COMPLETED 4/30/19		VERTICAL DATUM NGVD 29	
CREW CHIEF A. Woerpel		BORING OFFSET		LATITUDE	
FIELD LOG BY D. Harris		ROADWAY NAME 60th Street		LONGITUDE	
LOG QC BY B. Broback		STATION		NORTHING 324375	
COUNTY		OFFSET		EASTING 2538681	
TOWNSHIP		1/4 SECTION		SURFACE ELEVATION 696 ft	
RANGE		1/4 SECTION			
SECTION					

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
21 SS	18	4 6 8	14		645	51 (645)	CL			1.25	1.57			33	

Boring offset 40' North due to below-grade utilities and access
End of Boring at 51.0 ft.

WATER & CAVE-IN OBSERVATION DATA

	WATER ENCOUNTERED DURING DRILLING: 4ft.		CAVE DEPTH AT COMPLETION: NE	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: 28ft.		CAVE DEPTH AFTER 0 HOURS: N/A	DRY <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.				

PROJECT NAME

Great Water Alliance

PROJECT No

00521741

CONSULTANT

Greeley-Hansen

DRILLING CONTRACTOR

GESTRA

CREW CHIEF

A. Woerpel

FIELD LOG BY

D. Harris

LOG QC BY

B. Broback

COUNTY

CONSULTANT PROJECT No

DATE STARTED

5/01/19

DRILLING CONTRACTOR PROJECT No

DATE COMPLETED

5/01/19

DRILLING RIG

CME 75

DRILLING METHOD / HOLE SIZE

3 1/4 HSA

HAMMER TYPE

Auto

EFFICIENCY

90%

ROADWAY NAME

60th Street

STATION

OFFSET

TOWNSHIP

RANGE

SECTION

1/4 SECTION

1/4 SECTION

SURFACE ELEVATION

720 ft

BORING No

RF-B-41A

PAGE No

1 of 2

HORIZONTAL DATUM

NAD 27

VERTICAL DATUM

NGVD 29

LATITUDE

LONGITUDE

NORTHING

322939

EASTING

2538686

WATER & CAVE-IN OBSERVATION DATA

WATER ENCOUNTERED DURING DRILLING:

39ft.

CAVE DEPTH AT COMPLETION:

NE

WATER LEVEL AT COMPLETION:

25ft.

CAVE DEPTH AFTER 0 HOURS:




N/A

WATER LEVEL AFTER 0 HOURS:

N/A

NE = Not Encountered; NMR = No Measurement Recorded

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG						BORING No RF-B-41A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/01/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		PAGE No 2 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/01/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR GESTRA		DRILLING RIG CME 75		ROADWAY NAME 60th Street		NORTHING 322939		EASTING 2538686			
CREW CHIEF A. Woerpel		HAMMER TYPE Auto		EFFICIENCY 90%		STATION		OFFSET			
FIELD LOG BY D. Harris		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback		SURFACE ELEVATION 720 ft									




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
11 SS	18	3 6 8	14			Gray Silt With Interbedded Lean Clay Seams, Very Moist	ML							15	
						26.5 (693.5)									
12 SS	18	3 7 10	17			Gray Lean Clay, Trace Sand and Gravel, Moist to Very Moist				4.5	4.33			15	
13 SS	18	2 4 6	10	30	690					2.75	2.97			17	
14 SS	18	5 8 11	19				CL			4.5+	5.15			18	
15 SS	18	4 6 8	14	35	685					3.5	3.22			16	
16 SS	18	2 5 7	12							3.75	3.71			17	
						39 (681)									
17 SS	18	4 6 10	16	40	680	Gray Medium Sand, Wet	SP							24	
						41.5 (678.5)									
18 SS	18	4 7 8	15			Gray Lean Clay, With Fine Sand and Silt Seams, Very Moist	CL							17	
19 SS	18	5 8 9	17	45	675					2.75	2.97			20	
						46 (674)									










End of Boring at 46.0 ft.






WATER & CAVE-IN OBSERVATION DATA




▼	WATER ENCOUNTERED DURING DRILLING: 39ft.	<input checked="" type="checkbox"/>	CAVE DEPTH AT COMPLETION: NE	WET <input type="checkbox"/>
▼	WATER LEVEL AT COMPLETION: 25ft.	<input checked="" type="checkbox"/>	CAVE DEPTH AFTER 0 HOURS: N/A	DRY <input type="checkbox"/>
▼	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>











NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG						BORING No RF-B-49	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		1 of 1	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 4/30/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR GESTRA		DRILLING RIG Diedrich D50 ATV		BORING OFFSET		NORTHING 319177		EASTING 2539637			
CREW CHIEF B. Sargent		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 690 ft	
FIELD LOG BY K. Turner		ROADWAY NAME Reaeration Structure									
LOG QC BY B. Broback		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	24	1 2 3	5			Topsoil (5"± Thick) Brown Lean Clay, With Sand and Gravel, Trace Gray Mottling, Very Moist	OL			1.75	1.73			19	
2 SS	13	3 5 9	14				CL			4.25	4.12			16	
3 SS	18	5 7 10	17	5	685	Brown Lean Clay, With Sand and Gravel, With Silt Lenses, Moist	CL			2.75	2.89			17	
4 SS	18	5 10 14	24				CL			4.5+	4.95			17	
5 SS	18	4 7 11	18	10	680	Gray Lean Clay, Trace Sand and Gravel, With Silt Lenses and Seams, Moist to Wet	CL			4.5+	6.18			16	
6 SS	18	4 6 13	19				CL			3.75	3.87			21	
7 SS	16	4 6 9	15	15	675		CL							15	
8 SS	15	4 5 10	15			Gray Clayey Sand, Wet	SC							21	
9 SS	17	5 7		20	670	Gray Lean Clay, With Silt Seams, Very Moist	CL			3.0	2.89			17	
End of Boring at 21.0 ft.															






WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: 13.5ft.			CAVE DEPTH AT COMPLETION: 15ft.	
	WATER LEVEL AT COMPLETION: 12ft.			CAVE DEPTH AFTER 0 HOURS: N/A	
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded		
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					

PROJECT NAME Great Water Alliance				BORING LOG						BORING No RF-B-50	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		PAGE No 1 of 1		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 4/30/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR GESTRA		DRILLING RIG Diedrich D50 ATV		BORING OFFSET		NORTHING 319140		EASTING 2539639		SURFACE ELEVATION 688 ft	
CREW CHIEF B. Sargent		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		ROADWAY NAME Reaeration Structure							
FIELD LOG BY K. Turner		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET			
LOG QC BY B. Broback		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	16	1 3 4	7			Topsoil (7"± Thick)	OL								
						0.6 (687.4)									
						Brown Sandy Lean Clay, Very Moist	CL			2.5				23	
						2 (686)								23	
2 SS	18	4 5 8	13		685	Brown Lean Clay, With Sand and Silt Lenses, Trace Gravel, Moist					3.30			15	
3 SS	16	7 11 12	23	5			CL			4.5+	5.77			15	
4 ST	12				680					4.0	3.30				Shelby Tube was damaged
						9 (679)									
5 SS	18	4 8 10	18	10		Gray Lean Clay, Trace Sand and Gravel, Moist to Very Moist				2.0	2.89			19	
6 SS	8	4 5 7	12		675					3.0	2.64			19	
7 SS	18	3 6 7	13	15			CL			2.75	2.80			21	
8 SS	18	8 10 12	22		670					2.0	1.81			18	
9 SS	13	7 9 10	19	20							3.96			20	
						21 (667)									

End of Boring at 21.0 ft.

WATER & CAVE-IN OBSERVATION DATA

	WATER ENCOUNTERED DURING DRILLING: NE		CAVE DEPTH AT COMPLETION: 15.5ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE		CAVE DEPTH AFTER 0 HOURS: N/A	DRY <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>
				DRY <input type="checkbox"/>

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG						BORING No RF-B-51	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		1 of 1	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 4/30/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR GESTRA		DRILLING RIG Diedrich D50 ATV		ROADWAY NAME Reaeration Structure		NORTHING 319141		EASTING 2539659			
CREW CHIEF B. Sargent		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET			
FIELD LOG BY K. Turner		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback		SURFACE ELEVATION 687 ft									




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	17	1 2 4	6			Topsoil (6"± Thick)	OL								
					685	0.51 (686.49) Brown Sandy Lean Clay, Very Moist	CL			1.75	1.73			24	
2 SS	18	3 4 7	11			2 (685) Brown Lean Clay, With Gray Mottling, With Sand, Trace Gravel, Moist	CL			3.5	3.3			17	
						4 (683) Brown Lean Clay, Trace Sand and Gravel, With Silt Lenses, Damp									
3 SS	16	4 8 10	18	5						4.5+	8.45			19	
					680		CL								
4 SS	3	5 10 15	25							2.5				22	
5 SS	18	3 7 10	17	10		10 (677) Gray Lean Clay, Trace to With Sand and Gravel, With Fine Sand Lenses, Very Moist				4.5+	4.95			18	
					675										
6 SS	18	3 5 8	13							3.5	3.54			21	
7 SS	16	4 4 6	10	15			CL			4.5				22	
					670										
8 SS	18	7 7 8	15							2.25	2.5			21	
9 SS	15	7 9 7	16	20						2.25	2.97			20	
						21 (666)									

End of Boring at 21.0 ft.

WATER & CAVE-IN OBSERVATION DATA

▼	WATER ENCOUNTERED DURING DRILLING: NE	☒	CAVE DEPTH AT COMPLETION: 15ft.	WET <input type="checkbox"/>
▼	WATER LEVEL AT COMPLETION: NE	☒	CAVE DEPTH AFTER 0 HOURS: N/A	DRY <input type="checkbox"/>
▼	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>
				DRY <input type="checkbox"/>



NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance		 BORING LOG		 		BORING No RF-B-52	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		PAGE No 1 of 1	
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No		DATE COMPLETED 4/30/19		HORIZONTAL DATUM NAD 27	
DRILLING CONTRACTOR GESTRA		DRILLING CONTRACTOR PROJECT No		BORING OFFSET		VERTICAL DATUM NGVD 29	
CREW CHIEF B. Sargent		DRILLING RIG Diedrich D50 ATV		ROADWAY NAME Reaeration Structure		LATITUDE	
FIELD LOG BY K. Turner		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		STATION		LONGITUDE	
LOG QC BY B. Broback		HAMMER TYPE Auto		EFFICIENCY 85%		NORTHING 318836	
COUNTY		TOWNSHIP		RANGE		EASTING 2539659	
		SECTION		1/4 SECTION		SURFACE ELEVATION 676 ft	




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _c (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes	
1 SS	15	1 2 4	6		675	Topsoil (26"± Thick)	OL								28 45	
						2.2 (673.8)										
2 SS	14	2 4 5	9			Brown Sandy Lean Clay, With Gray Mottling, Moist	CL		2.5	2.31			20			
						4 (672)										
3 SS	11	2 1 3	4	5		Brown Lean Clay, Trace Sand and Gravel, With Gray Mottling, Very Moist to Moist	CL			2.06			26			
4 SS	16	4 8 13	21			9 (667)			4.5+				17			
5 SS	18	4 9 12	21	10		Grayish Brown to Gray Lean Clay, Trace Sand and Gravel, With Sand Seams, Moist to Very Moist	CL		4.5+	4.33			15			
6 SS	16	3 5 6	11							1.75	1.40			24		
7 SS	12	3 4 7	11	15						3.0	3.30			20		
8 SS	10	4 5 7	12					2.5	1.98			21				
9 SS	11	4 6 8	14	20												








End of Boring at 21.0 ft.

WATER & CAVE-IN OBSERVATION DATA




▼	WATER ENCOUNTERED DURING DRILLING: 5ft.		CAVE DEPTH AT COMPLETION: 15.5ft.	WET <input type="checkbox"/>
▼	WATER LEVEL AT COMPLETION: 3.5ft.		CAVE DEPTH AFTER 0 HOURS: N/A	DRY <input type="checkbox"/>
▼	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>
				DRY <input type="checkbox"/>

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME GWA - Alternative BPS Site		 BORING LOG		 		BORING No RF-B-53	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		PAGE No 1 of 1	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 4/30/19		HORIZONTAL DATUM NAD 27	
DRILLING CONTRACTOR GESTRA		DRILLING RIG Diedrich D50 ATV		BORING OFFSET		VERTICAL DATUM NGVD 29	
CREW CHIEF B. Sargent		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		ROADWAY NAME Reaeration Structure		LATITUDE	
FIELD LOG BY K. Turner		HAMMER TYPE Auto		EFFICIENCY 85%		LONGITUDE	
LOG QC BY B. Broback		STATION		OFFSET		NORTHING 319177	
COUNTY		TOWNSHIP		RANGE		EASTING 2539637	
		SECTION		1/4 SECTION		SURFACE ELEVATION 690 ft	

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	24	1 2 3	5			Topsoil (5"± Thick)	OL								
						0.4 (689.6)									
						Brown Lean Clay, With Sand and Gravel, Trace Gray Mottling, Very Moist	CL			1.75	1.73			19	
2 SS	13	3 5 9	14							4.25	4.12			16	
						4 (686)									
						Brown Lean Clay, With Sand and Gravel, With Silt Lenses, Moist	CL			2.75	2.89			17	
3 SS	18	5 7 10	17												
4 SS	18	5 10 14	24							4.5+	4.95			17	
						9 (681)									
						Gray Lean Clay, Trace Sand and Gravel, With Silt Lenses and Seams, Moist to Wet				4.5+	6.18			16	
5 SS	18	4 7 11	18												
6 SS	18	4 6 13	19				CL			3.75	3.87			21	
7 SS	16	4 6 9	15											15	
						16.5 (673.5)									
						Gray Clayey Sand, Wet	SC							21	
8 SS	15	4 5 10	15												
						19 (671)									
						Gray Lean Clay, With Silt Seams, Very Moist	CL			3.0	2.89			17	
9 SS	17	5 7				21 (669)									

End of Boring at 21.0 ft.

WATER & CAVE-IN OBSERVATION DATA			
	WATER ENCOUNTERED DURING DRILLING:	13.5ft.	CAVE DEPTH AT COMPLETION: 15ft.
	WATER LEVEL AT COMPLETION:	12ft.	CAVE DEPTH AFTER 0 HOURS: N/A
	WATER LEVEL AFTER 0 HOURS:	N/A	NE = Not Encountered; NMR = No Measurement Recorded

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME

GWA - Alternative BPS Site

PROJECT No

00521741

CONSULTANT

Greeley-Hansen

DRILLING CONTRACTOR

GESTRA

CREW CHIEF

B. Sargent

FIELD LOG BY

K. Turner

LOG QC BY

B. Broback

COUNTY

GREAT WATER ALLIANCE

BORING LOG

Intertek

psi

BORING No

RF-B-54

PAGE No

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CONSULTANT PROJECT No

DATE STARTED

4/30/19

HORIZONTAL DATUM

NAD 27

VERTICAL DATUM

NGVD 29

DRILLING CONTRACTOR PROJECT No

DATE COMPLETED

4/30/19

LATITUDE

DRILLING RIG

Diedrich D50 ATV

BORING OFFSET

LONGITUDE

DRILLING METHOD / HOLE SIZE

3 1/4 HSA

ROADWAY NAME

Reaeration Structure

NORTHING

319140

HAMMER TYPE

Auto

EFFICIENCY

85%

STATION

OFFSET

EASTING

2539639

TOWNSHIP

RANGE

SECTION

1/4 SECTION

1/4 SECTION

SURFACE ELEVATION

688 ft

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	16	1 3 4	7			Topsoil (7"± Thick)	OL								
						0.6 (687.4)									
						Brown Sandy Lean Clay, Very Moist	CL			2.5				23	
						2 (686)								23	
2 SS	18	4 5 8	13		685	Brown Lean Clay, With Sand and Silt Lenses, Trace Gravel, Moist					3.30			15	
3 SS	16	7 11 12	23	5			CL			4.5+	5.77			15	
4 ST	12				680					4.0	3.30				Shelby Tube was damaged
						9 (679)									
5 SS	18	4 8 10	18	10		Gray Lean Clay, Trace Sand and Gravel, Moist to Very Moist				2.0	2.89			19	
6 SS	8	4 5 7	12		675					3.0	2.64			19	
7 SS	18	3 6 7	13	15			CL			2.75	2.80			21	
8 SS	18	8 10 12	22		670					2.0	1.81			18	
9 SS	13	7 9 10	19	20							3.96			20	
						21 (667)									
End of Boring at 21.0 ft.															

WATER & CAVE-IN OBSERVATION DATA

WATER ENCOUNTERED DURING DRILLING:

NE

CAVE DEPTH AT COMPLETION:

15.5ft.

WATER LEVEL AT COMPLETION:

NE

CAVE DEPTH AFTER 0 HOURS:

N/A

WATER LEVEL AFTER 0 HOURS:

N/A

NE = Not Encountered; NMR = No Measurement Recorded

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME

GWA - Alternative BPS Site

PROJECT No

00521741

CONSULTANT

Greeley-Hansen

DRILLING CONTRACTOR

GESTRA

CREW CHIEF

B. Sargent

FIELD LOG BY

K. Turner

LOG QC BY

B. Broback

COUNTY

GREAT WATER ALLIANCE

BORING LOG

Intertek

psi

BORING No

RF-B-55

PAGE No

1 of 1

CONSULTANT PROJECT No

DATE STARTED

4/30/19

HORIZONTAL DATUM

NAD 27

VERTICAL DATUM

NGVD 29

DRILLING CONTRACTOR PROJECT No

DATE COMPLETED

4/30/19

LATITUDE

DRILLING RIG

Diedrich D50 ATV

BORING OFFSET

LONGITUDE

DRILLING METHOD / HOLE SIZE

3 1/4 HSA

ROADWAY NAME

Reaeration Structure

NORTHING

319141

HAMMER TYPE

Auto

EFFICIENCY

85%

STATION

OFFSET

EASTING

2539659

TOWNSHIP

RANGE

SECTION

1/4 SECTION

1/4 SECTION

SURFACE ELEVATION




687 ft

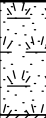




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	17	1 2 4	6			Topsoil (6"± Thick)	OL								
					685	0.51 (686.49) Brown Sandy Lean Clay, Very Moist	CL			1.75	1.73			24	
2 SS	18	3 4 7	11			2 (685) Brown Lean Clay, With Gray Mottling, With Sand, Trace Gravel, Moist	CL			3.5	3.3			17	
						4 (683) Brown Lean Clay, Trace Sand and Gravel, With Silt Lenses, Damp									
3 SS	16	4 8 10	18	5						4.5+	8.45			19	
					680		CL								
4 SS	3	5 10 15	25							2.5				22	
5 SS	18	3 7 10	17	10		10 (677) Gray Lean Clay, Trace to With Sand and Gravel, With Fine Sand Lenses, Very Moist				4.5+	4.95			18	
					675										
6 SS	18	3 5 8	13							3.5	3.54			21	
7 SS	16	4 4 6	10	15			CL			4.5				22	
					670										
8 SS	18	7 7 8	15							2.25	2.5			21	
9 SS	15	7 9 7	16	20						2.25	2.97			20	
						21 (666)									
End of Boring at 21.0 ft.															

WATER & CAVE-IN OBSERVATION DATA






WATER ENCOUNTERED DURING DRILLING:	NE	CAVE DEPTH AT COMPLETION:	15ft.	WET <input type="checkbox"/>
WATER LEVEL AT COMPLETION:	NE	CAVE DEPTH AFTER 0 HOURS:	N/A	DRY <input type="checkbox"/>
WATER LEVEL AFTER 0 HOURS:	N/A	NE = Not Encountered; NMR = No Measurement Recorded		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.




PROJECT NAME GWA - Alternative BPS Site		 BORING LOG		 		BORING No RF-B-56	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 4/30/19		PAGE No 1 of 1	
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No		DATE COMPLETED 4/30/19		HORIZONTAL DATUM NAD 27	
DRILLING CONTRACTOR GESTRA		DRILLING CONTRACTOR PROJECT No		BORING OFFSET		VERTICAL DATUM NGVD 29	
CREW CHIEF B. Sargent		DRILLING RIG Diedrich D50 ATV		ROADWAY NAME Reaeration Structure		LATITUDE	
FIELD LOG BY K. Turner		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		STATION		LONGITUDE	
LOG QC BY B. Broback		HAMMER TYPE Auto		EFFICIENCY 85%		NORTHING 318836	
COUNTY		TOWNSHIP		RANGE		EASTING 2539659	
		SECTION		1/4 SECTION		SURFACE ELEVATION 676 ft	

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
1 SS	15	1 2 4	6		675	Topsoil (26"± Thick)	OL							28 45	
						2.2 (673.8)									
2 SS	14	2 4 5	9			Brown Sandy Lean Clay, With Gray Mottling, Moist	CL			2.5	2.31			20	
						4 (672)									
3 SS	11	2 1 3	4	5		Brown Lean Clay, Trace Sand and Gravel, With Gray Mottling, Very Moist to Moist	CL				2.06			26	
4 SS	16	4 8 13	21							4.5+				17	
						9 (667)									
5 SS	18	4 9 12	21	10		Grayish Brown to Gray Lean Clay, Trace Sand and Gravel, With Sand Seams, Moist to Very Moist				4.5+	4.33			15	
6 SS	16	3 5 6	11							1.75	1.40			24	
7 SS	12	3 4 7	11	15			CL			3.0	3.30			20	
8 SS	10	4 5 7	12							2.5	1.98			21	
9 SS	11	4 6 8	14	20						2.0	2.31			18	
						21 (655)									






End of Boring at 21.0 ft.




WATER & CAVE-IN OBSERVATION DATA			
	WATER ENCOUNTERED DURING DRILLING: 5ft.		CAVE DEPTH AT COMPLETION: 15.5ft.
	WATER LEVEL AT COMPLETION: 3.5ft.		CAVE DEPTH AFTER 0 HOURS: N/A
	WATER LEVEL AFTER 0 HOURS: N/A	NE = Not Encountered; NMR = No Measurement Recorded	


NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG		 		BORING No CC-B-005A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/13/19		HORIZONTAL DATUM NAD 27		PAGE No 1 of 2	
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No		DATE COMPLETED 5/13/19		VERTICAL DATUM NGVD 29			
DRILLING CONTRACTOR PSI		DRILLING CONTRACTOR PROJECT No		BORING OFFSET		LATITUDE		LONGITUDE	
CREW CHIEF P. Rotaru		DRILLING RIG HD ATV #419		ROADWAY NAME Ryan Road		NORTHING 324464			
FIELD LOG BY R. Bladorn		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		STATION		EASTING 2534517			
LOG QC BY B. Broback		HAMMER TYPE Auto		EFFICIENCY 85%		SURFACE ELEVATION 702 ft			
COUNTY		TOWNSHIP		RANGE		SECTION		1/4 SECTION	

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Fill, Gray Silty Sand and Gravel, Moist	SM								
1	10	4	6		700	0.8 (701.2)	CL			3.75	3.96			7	
		3				Fill, Gray and Black Lean Clay, Trace Sand and Gravel, Moist								14	
						3 (699)									
2	13	3	7		5	Gray Lean Clay, with Greenish Brown Mottling, Very Moist	CL							20	
		3				5.5 (696.5)									
3	5	2	4		695	Brown Sandy Silty Clay, Very Moist	CL							29	
		2				8 (694)									
4	7	1	3		10	Gray Lean Clay, with Silt Seams, Very Moist to Moist	CL							18	
		1				10.5 (691.5)									
5	15	3	16		690	Brown to Grayish Brown Lean Clay, Trace Sand and Gravel, with Sand Seams, Moist to Very Moist				4.5+	7.42			14	
		6													
6	18	8	17		15		CL							17	
		9													
						17 (685)									
						Gray Lean Clay, Trace Sand and Gravel, with Silt Lenses, Very Moist									
7	16	4	11		20					2.75	3.05			22	
		5													
		6					CL								
8	18	4	12		25					3.0	3.30			20	
		5													
		7													






WATER & CAVE-IN OBSERVATION DATA				
	WATER ENCOUNTERED DURING DRILLING:	NE		CAVE DEPTH AT COMPLETION: 33ft.
	WATER LEVEL AT COMPLETION:	NE		CAVE DEPTH AFTER 0 HOURS: N/A
	WATER LEVEL AFTER 0 HOURS:	N/A	NE = Not Encountered; NMR = No Measurement Recorded	
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.				




PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-005A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/13/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		2 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/13/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Ryan Road		NORTHING 324464		EASTING 2534517			
CREW CHIEF P. Rotaru		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 702 ft	
FIELD LOG BY R. Bladorn		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
					675	Gray Lean Clay, Trace Sand and Gravel, with Silt Lenses, Very Moist	CL			2.75	3.13			21	
9	SS	18	4 5 7	12	30										
					670										
10	SS	18	5 7 7	14	35										
					665										
11	SS	18	4 6 7	13	40	40 (662)				2.75	2.81			21	






Boring offset 20' to the South due to a slope and very wet area




End of Boring at 40.0 ft.


WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: NE			CAVE DEPTH AT COMPLETION: 33ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE			CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded		WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					

PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-016A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/13/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		1 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/13/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Ryan Road		NORTHING 324193		EASTING 2527043			
CREW CHIEF P. Rotaru		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 779 ft	
FIELD LOG BY R. Bladorn		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Topsoil Fill (5.5'± Thick)									
1 SS	10	2 2 2	4				OL							16	
														36	
															Organic Content = 4.5%
2 SS	16	2 2 3	5	775										43	
				5		5.5 (773.5)									
						Brown Lean Clay, Trace Gray Mottling, Trace Sand and Gravel, Moist	CL			4.0	4.12			19	
3 SS	17	3 3 4	7												
4 SS	17	5 5 5	10	770						4.5+	7.83			16	
				10		10.5 (768.5)									
						Gray Lean Clay, with Sand Lenses and Seams, Trace Sand and Gravel, Moist to Wet									
5 SS	6	6 10 10	20											16	
6 SS	11	5 8 9	17	765										16	
				15											
							CL								
7 SS	15	3 4 6	10	760										15	
				20											
8 SS	4	5 6 6	12	755										22	
				25											

WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: 22ft.			CAVE DEPTH AT COMPLETION: 18ft.	
	WATER LEVEL AT COMPLETION: 13ft.			CAVE DEPTH AFTER 0 HOURS: N/A	
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded		
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					






PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-016A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/13/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		PAGE No 2 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/13/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Ryan Road		NORTHING 324193		EASTING 2527043			
CREW CHIEF P. Rotaru		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 779 ft	
FIELD LOG BY R. Bladorn		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Gray Lean Clay, with Sand Lenses and Seams, Trace Sand and Gravel, Moist to Wet 27.5 (751.5)	CL								




End of Boring at 27.5' Due to Auger Refusal on
Possible Cobbles, Boulders, or Bedrock





Boring offset 6.5' North due to slope and wetland
End of Boring at 27.5 ft.






WATER & CAVE-IN OBSERVATION DATA




	WATER ENCOUNTERED DURING DRILLING: 22ft.		CAVE DEPTH AT COMPLETION: 18ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: 13ft.		CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>


NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG		 		BORING No CC-B-017A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/23/19		PAGE No 1 of 2			
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No		DATE STARTED 5/23/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29	
DRILLING CONTRACTOR PSI		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/23/19		LATITUDE			
CREW CHIEF P. Rotaru		DRILLING RIG HD ATV #419		BORING OFFSET		LONGITUDE			
FIELD LOG BY V. Jones		DRILLING METHOD / HOLE SIZE 3 1/4" HSA		ROADWAY NAME Ryan Road		NORTHING 324164			
LOG QC BY B. Broback		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		EASTING 2526391	
COUNTY		TOWNSHIP		RANGE		SECTION		1/4 SECTION	
								SURFACE ELEVATION 780 ft	

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Topsoil (11"± Thick)	OL								
1	6	237	10			Brown Mottled Gray Lean Clay with Silt Lenses, Trace Sand and Gravel, Very Moist to Moist	CL			4.0				30	
2	9	111517	32	5	775					4.5+	10.31			15	
						5.5 (774.5)									
3	5	7915	24			Brown Lean Clay, Trace Sand and Gravel, Moist	CL			4.5+	10.31			15	
4	8	111314	27	10	770					4.5+	7.42			17	
						10.5 (769.5)									
5	8	588	16			Brownish Gray to Gray Lean Clay, Trace Sand and Gravel, with Fine Sand Seams, Very Moist	CL			4.0	4.33			17	
6	8	368	14	15	765					3.0	3.30			17	
							CL								
7	10	447	11	20	760					3.5				18	
8	11	657	12	25	755					2.5	2.56			21	






WATER & CAVE-IN OBSERVATION DATA				
	WATER ENCOUNTERED DURING DRILLING: NE		CAVE DEPTH AT COMPLETION: 30ft.	WET <input type="checkbox"/> DRY <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE		CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/> DRY <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A	NE = Not Encountered; NMR = No Measurement Recorded		
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.				

PROJECT NAME Great Water Alliance				BORING LOG		 		BORING No CC-B-017A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/23/19		HORIZONTAL DATUM NAD 27		PAGE No 2 of 2	
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No		DATE STARTED 5/23/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29	
DRILLING CONTRACTOR PSI		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/23/19		LATITUDE		LONGITUDE	
CREW CHIEF P. Rotaru		DRILLING RIG HD ATV #419		BORING OFFSET		NORTHING 324164		EASTING 2526391	
FIELD LOG BY V. Jones		DRILLING METHOD / HOLE SIZE 3 1/4" HSA		ROADWAY NAME Ryan Road		STATION		OFFSET	
LOG QC BY B. Broback		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET	
COUNTY		TOWNSHIP		RANGE		SECTION		1/4 SECTION	
								SURFACE ELEVATION 780 ft	




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
9 SS	12	4 5 8	13	30	750	Brownish Gray to Gray Lean Clay, Trace Sand and Gravel, with Fine Sand Seams, Very Moist	CL			3.0	2.39			19	
10 SS	6	7 8 11	19	35	745					3.0	2.89			20	








End of Boring at 35.0 ft.






WATER & CAVE-IN OBSERVATION DATA

	WATER ENCOUNTERED DURING DRILLING: NE		CAVE DEPTH AT COMPLETION: 30ft.	WET <input type="checkbox"/> DRY <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE		CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/> DRY <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	




NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-021A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/22/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		1 of 3	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/22/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Ryan Road		NORTHING 324030		EASTING 2522371			
CREW CHIEF P. Rotaru		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 790 ft	
FIELD LOG BY R. Bladorn		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											






Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Topsoil (10"± Thick)	OL								
1	18	5 6 7	13			Brown Mottled Gray Lean Clay with Clay Sand Seams, with Gravel, Very Moist	CL							43	
						3 (787)								17	
2	18	8 11 16	27			Brown Lean Clay, Trace Gray Mottling, with Silt Lenses, Trace Sand and Gravel, Moist	CL							16	
				5	785										
3	18	8 11 14	25							4.5	6.80			16	
						8 (782)									
4	12	8 12 17	29			Brown Lean Clay, Trace Sand, with Gravel, Moist	CL			4.5	5.98			13	
				10	780										
5	0	11 11 16	27											15	
						13 (777)									
6	18	6 11 16	27			Gray Lean Clay, Trace Sand and Gravel, with Silt Lenses, Moist to Very Moist	CL			4.5	5.15			16	
				15	775										
7	15	4 5 6	11				CL			2.5	2.47			18	
				20	770										
8	18	2 3 6	9							1.5	1.73			22	
				25	765										




WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: NE			CAVE DEPTH AT COMPLETION: 48ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE			CAVE DEPTH AFTER 0 HOURS: N/A	DRY <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded		


NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-021A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/22/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		2 of 3	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/22/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Ryan Road		NORTHING 324030		EASTING 2522371			
CREW CHIEF P. Rotaru		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 790 ft	
FIELD LOG BY R. Bladorn		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											
COUNTY											

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Gray Lean Clay, Trace Sand and Gravel, with Silt Lenses, Moist to Very Moist									
9 SS	18	4 4 5	9	30	760					1.75	1.73			25	
10 SS	18	4 5 6	11	35	755					1.5	1.73			24	
11 SS	18	4 4 5	9	40	750					1.5	1.98			30	
12 SS	18	4 6 6	12	45	745					1.5	2.06			22	
13 SS	12	4 6 5	11	50	740					2.0	1.98			21	






WATER & CAVE-IN OBSERVATION DATA						
	WATER ENCOUNTERED DURING DRILLING: NE			CAVE DEPTH AT COMPLETION: 48ft.		WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE			CAVE DEPTH AFTER 0 HOURS: N/A		WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded			WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.						

PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-021A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/22/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		3 of 3	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/22/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Ryan Road		NORTHING 324030		EASTING 2522371			
CREW CHIEF P. Rotaru		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 790 ft	
FIELD LOG BY R. Bladorn		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											
COUNTY											




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
14 SS	0	665	11	55	735	Gray Lean Clay, Trace Sand and Gravel, with Silt Lenses, Moist to Very Moist	CL			2.0	1.24			21	











Boring offset 7' to the East due to tree
End of Boring at 55.0 ft.






WATER & CAVE-IN OBSERVATION DATA




	WATER ENCOUNTERED DURING DRILLING: NE		CAVE DEPTH AT COMPLETION: 48ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE		CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-050A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/08/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		1 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/08/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG ASV ATV #420		ROADWAY NAME Durham Drive		NORTHING 337840		EASTING 2509497			
CREW CHIEF T. Ebert		HAMMER TYPE Auto		EFFICIENCY 81%		STATION		OFFSET		SURFACE ELEVATION 796 ft	
FIELD LOG BY D. Ebert		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
					795	Topsoil Fill (9"± Thick)	OL								
1	7	4	11			Fill, Brown and Black Sandy Lean Clay and Gravel, Moist	CL		2.0					22	
		6												19	
		5													
2	16	5	23			Buried Topsoil, Dark Gray Silt, Trace Organics, Moist	OL							14	Organic Content = 4.5%
		10			5										
		13													
3	10	4	10		790	Brown Lean Clay, with Gray Mottling and Silt Seams/Lenses, Very Moist	CL		2.0	1.65				17	
		5													
4	12	3	8			Brown Silty Fine Sand, with Gray Mottling, Very Moist to Wet	SM							22	
		4			10										
		4													
5	17	7	16		785	Brown Lean Clay, with Fine Sand Lenses, Moist	CL		4.0	2.80				26	
		7													
		9													
6	18	3	8		15	Gray Lean Clay, with Silt Lenses, Very Moist			2.0	2.47				24	
		4													
		4			780		CL								
7	16	3	9		20				2.0	3.13				23	
		4													
		5			775										
8	18	3	6		25	Gray Silt, Wet	ML							25	
		4													
		2													






WATER & CAVE-IN OBSERVATION DATA						
	WATER ENCOUNTERED DURING DRILLING:	8ft.		CAVE DEPTH AT COMPLETION:	25ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION:	20ft.		CAVE DEPTH AFTER 0 HOURS:	N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS:	N/A		NE = Not Encountered; NMR = No Measurement Recorded		WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.						

PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-050A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/08/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		2 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/08/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG ASV ATV #420		ROADWAY NAME Durham Drive		NORTHING 337840		EASTING 2509497			
CREW CHIEF T. Ebert		HAMMER TYPE Auto		EFFICIENCY 81%		STATION		OFFSET		SURFACE ELEVATION 796 ft	
FIELD LOG BY D. Ebert		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
					770	Gray Silt, Wet									
9 SS	16	2 3 4	7	30			ML							21	P ₁₀ = 100% P ₆₀ = 100% P ₂₀₀ = 98.9%
					765										
						32 (764)									
10 SS	15	3 3 4	7	35		Gray Lean Clay, With Silt Seams, Very Moist				1.5	1.4			19	
					760		CL								
11 SS	18	4 3 4	7	40						1.25	1.07			20	
					755										
12 SS	16	4 4 5	9	45						1.25	1.40			21	






End of Boring at 45.0 ft.






WATER & CAVE-IN OBSERVATION DATA




	WATER ENCOUNTERED DURING DRILLING: 8ft.		CAVE DEPTH AT COMPLETION: 25ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: 20ft.		CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>


NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.






PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-050B	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/09/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		1 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/09/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Durham Drive		NORTHING 337550		EASTING 2509624			
CREW CHIEF T. Ebert		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET		SURFACE ELEVATION 793 ft	
FIELD LOG BY D. Ebert		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback											
COUNTY											




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Topsoil Fill (12"± Thick)									
1 SS	18	8 5 4	9			1.01 (791.99)	OL							24	
					790	Fill, Brown and Gray Lean Clay with Sand and Gravel, Very Moist	CL							13	
						3 (790)									
2 SS	10	2 3 5	8			Brown Lean Clay, with Gray Mottling, Trace Sand and Gravel, Very Moist	CL			4.5	4.04			15	
					5	5.5 (787.5)									
3 SS	0	10 13 13	26			Brown Silty Clay, with Fine Sand Lenses, Very Moist	CL-ML								
					785										
4 SS	17	7 9 12	21			10.5 (782.5)				2.5	4.12			14	
					10	Gray Lean Clay, with Silt Lenses, Very Moist									
5 SS	18	4 6 7	13							3.0	3.38			21	
					780										
6 SS	17	4 4 5	9							2.25	2.64			24	
					15										
					775		CL								
7 SS	18	2 3 4	7							2.0	3.54			24	
					20										
					770										
8 SS	18	1 3 4	7							2.0	2.39			23	
					25										





WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: NE			CAVE DEPTH AT COMPLETION: 40ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE			CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded		WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					

PROJECT NAME Great Water Alliance		 BORING LOG		 		BORING No CC-B-050B	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/09/19		PAGE No 2 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/09/19		HORIZONTAL DATUM NAD 27	
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		BORING OFFSET		VERTICAL DATUM NGVD 29	
CREW CHIEF T. Ebert		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		ROADWAY NAME Durham Drive		LATITUDE	
FIELD LOG BY D. Ebert		HAMMER TYPE Auto		EFFICIENCY 85%		LONGITUDE	
LOG QC BY B. Broback		STATION		OFFSET		NORTHING 337550	
COUNTY		TOWNSHIP		RANGE		EASTING 2509624	
		SECTION		1/4 SECTION		SURFACE ELEVATION 793 ft	






Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
					765	Gray Lean Clay, with Silt Lenses, Very Moist	CL			1.0	1.81			25	
9	18	2 4 4	8	30											
10	18	3 4 4	8	35	760					1.5	2.56			20	
11	18	3 4 5	9	40	755					1.25	2.56			31	
					40	End of Boring at 40.0 ft.									

WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: NE			CAVE DEPTH AT COMPLETION: 40ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: NE			CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A			NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					




PROJECT NAME Great Water Alliance				BORING LOG			 		BORING No CC-B-056A	
PROJECT No 00521741									PAGE No 1 of 2	
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No			DATE STARTED 5/08/19			HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29
DRILLING CONTRACTOR PSI		DRILLING CONTRACTOR PROJECT No			DATE COMPLETED 5/08/19			LATITUDE		
CREW CHIEF P. Rotaru		DRILLING RIG HD ATV #419			BORING OFFSET			LONGITUDE		
FIELD LOG BY R. Bladorn		DRILLING METHOD / HOLE SIZE 3 1/4 HSA			ROADWAY NAME Moorland Road			NORTHING 340233		
LOG QC BY B. Broback		HAMMER TYPE Auto	EFFICIENCY 85%		STATION		OFFSET	EASTING 2506740		
COUNTY		TOWNSHIP	RANGE	SECTION		1/4 SECTION		1/4 SECTION		SURFACE ELEVATION 812 ft




Sample No. / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Topsoil Fill (10"± Thick)	OL								
1 SS	10	5 7 8	15		810	0.8 (811.2) Fill, Brown Lean Clay with Crushed Concrete, Moist	CL							24	
						3 (809) Possible Fill, Brown Lean Clay, Trace Sand and Gravel, with Silt Lenses, Moist								13	
2 SS	15	4 5 5	10		5					3.0				20	
3 SS	4	3 3 3	6		805		CL			1.25				17	
4 SS	3	3 5 6	11		10					3.0				18	
						10.5 (801.5) Brown Lean Clay, with Grayish Brown Mottling, Trace Sand and Gravel, Moist	CL			2.75	3.38			17	
5 SS	13	5 7 7	14		800										
						13 (799) Brown Lean Clay, Trace Sand and Gravel, Very Moist	CL			2.75	2.64			15	
6 SS	15	4 6 8	14		15										
						17 (795) Gray Lean Clay, Trace Sand and Gravel, Moist									
7 SS	18	6 6 9	15		20					3.0	3.54			14	
							CL								
					790										
8 SS	17	10 6 8	14		25					3.0	3.38			27	






WATER & CAVE-IN OBSERVATION DATA




WATER & CAVE IN OBSERVATION DATA				
	WATER ENCOUNTERED DURING DRILLING: 27ft.		CAVE DEPTH AT COMPLETION: 23.5ft.	WET DRY <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: 18ft.		CAVE DEPTH AFTER 0 HOURS: N/A	WET DRY <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	










NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.






PROJECT NAME Great Water Alliance				BORING LOG						BORING No CC-B-056A	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/08/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29		PAGE No 2 of 2	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/08/19		LATITUDE		LONGITUDE			
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		ROADWAY NAME Moorland Road		NORTHING 340233		EASTING 2506740		SURFACE ELEVATION 812 ft	
CREW CHIEF P. Rotaru		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET			
FIELD LOG BY R. Bladorn		TOWNSHIP		RANGE		SECTION		1/4 SECTION		1/4 SECTION	
LOG QC BY B. Broback		COUNTY									




Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Gray Lean Clay, Trace Sand and Gravel, Moist	CL								
					785										
						Gray Silty Fine Sand, Wet									
9 SS	18	4 7 9	16		30		SM							27	
					780										
10 SS	18	4 6 7	13											27	
					35										
End of Boring at 35.0 ft.															




WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: 27ft.			CAVE DEPTH AT COMPLETION: 23.5ft.	
	WATER LEVEL AT COMPLETION: 18ft.			CAVE DEPTH AFTER 0 HOURS: N/A	
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded		
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					

PROJECT NAME Great Water Alliance				BORING LOG		 		BORING No CC-B-057B	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/09/19		PAGE No 1 of 2			
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No		DATE COMPLETED 5/09/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29	
DRILLING CONTRACTOR PSI		DRILLING CONTRACTOR PROJECT No		BORING OFFSET		LATITUDE		LONGITUDE	
CREW CHIEF T. Ebert		DRILLING RIG HD ATV #419		ROADWAY NAME Moorland Road		NORTHING 340761			
FIELD LOG BY D. Ebert		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		STATION		EASTING 2506502			
LOG QC BY B. Broback		HAMMER TYPE Auto		EFFICIENCY 85%		OFFSET			
COUNTY		TOWNSHIP		RANGE		SECTION		SURFACE ELEVATION 821 ft	






Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
					820	Topsoil (6"± Thick)	OL								
1	SS	18	4 6 9			0.51 (820.49) Brown Sandy Lean Clay, Trace Gravel, with Silt Lenses, Moist	CL			4.5	5.56			15	
						3 (818) Brown Lean Clay, Trace Sand and Gravel, with Silt Lenses, Moist	CL			4.5	5.15			15	
2	SS	18	7 10 13	5		5.5 (815.5) Brown Lean Clay, with Grayish Brown Mottling, Trace Sand and Gravel, with Silty Lenses, Moist	CL			4.5	8.24			14	
3	SS	18	7 13 16				CL			4.5	5.15			17	
4	SS	18	5 8 12	10		10.5 (810.5) Gray Lean Clay, Trace to with Sand and Gravel, with Silt Lenses, Very Moist	CL			2.25	3.22			17	
5	SS	18	6 7 9				CL			2.5	3.30			15	
6	SS	17	4 6 7	15		17 (804) Gray Medium to Fine Sand, Wet	SP							21	
7	SS	3	1 1 3	20		22 (799) Gray Lean Clay, with Interbedded Silt Seams, Very Moist	CL			1.5	2.23			20	
8	SS	18	6 6 8	25											




WATER & CAVE-IN OBSERVATION DATA					
	WATER ENCOUNTERED DURING DRILLING: 17ft.			CAVE DEPTH AT COMPLETION: 20ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: 11ft.			CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded		WET <input type="checkbox"/>
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.					











PROJECT NAME Great Water Alliance				BORING LOG		 		BORING No CC-B-057B	
PROJECT No 00521741		CONSULTANT PROJECT No		DATE STARTED 5/09/19		HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29	
CONSULTANT Greeley-Hansen		DRILLING CONTRACTOR PROJECT No		DATE COMPLETED 5/09/19		LATITUDE		LONGITUDE	
DRILLING CONTRACTOR PSI		DRILLING RIG HD ATV #419		BORING OFFSET		NORTHING 340761		EASTING 2506502	
CREW CHIEF T. Ebert		DRILLING METHOD / HOLE SIZE 3 1/4 HSA		ROADWAY NAME Moorland Road		SURFACE ELEVATION 821 ft			
FIELD LOG BY D. Ebert		HAMMER TYPE Auto		EFFICIENCY 85%		STATION		OFFSET	
LOG QC BY B. Broback		TOWNSHIP		RANGE		SECTION		1/4 SECTION	
COUNTY									

Sample No / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q_u (tsf)	Unconfined Comp. Strength Q_u (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
					795	Gray Lean Clay, with Interbedded Silt Seams, Very Moist	CL								
						27 (794)									
9 SS	18	15 17 18	35		30	Gray Medium to Coarse Sand and Gravel, with Fine Sand Seams, Wet								8	
					790		SP								
10 SS	18	9 8 15	23		35									16	
					785										
						37 (784)									
						Gray Fine Sand, Wet									
11 SS	17	6 8 10	18		40		SP							21	
					780										
12 SS		6 15 20	35		45									16	
						45 (776)									

End of Boring at 45.0 ft.






WATER & CAVE-IN OBSERVATION DATA			
	WATER ENCOUNTERED DURING DRILLING: 17ft.		CAVE DEPTH AT COMPLETION: 20ft.
	WATER LEVEL AT COMPLETION: 11ft.		CAVE DEPTH AFTER 0 HOURS: N/A
	WATER LEVEL AFTER 0 HOURS: N/A	NE = Not Encountered; NMR = No Measurement Recorded	
NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.			

PROJECT NAME Great Water Alliance				BORING LOG			 		BORING No CC-B-064A	
PROJECT No 00521741									PAGE No 1 of 1	
CONSULTANT Greeley-Hansen		CONSULTANT PROJECT No			DATE STARTED 5/08/19			HORIZONTAL DATUM NAD 27		VERTICAL DATUM NGVD 29
DRILLING CONTRACTOR PSI		DRILLING CONTRACTOR PROJECT No			DATE COMPLETED 5/08/19			LATITUDE		
CREW CHIEF P. Rotaru		DRILLING RIG HD ATV #419			BORING OFFSET			LONGITUDE		
FIELD LOG BY R. Bladorn		DRILLING METHOD / HOLE SIZE 3 1/4 HSA			ROADWAY NAME Moorland Road			NORTHING 345863		
LOG QC BY B. Broback		HAMMER TYPE Auto	EFFICIENCY 85%		STATION		OFFSET	EASTING 2505028		
COUNTY		TOWNSHIP	RANGE	SECTION		1/4 SECTION		1/4 SECTION		SURFACE ELEVATION 845 ft

Sample No. / Type	Sample Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation (ft)	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Graphic	Well Diagram	Unconfined Comp. Strength Q _u (tsf)	Unconfined Comp. Strength Q _c (tsf)	Liquid Limit (%)	Plasticity Index (%)	Moisture Content (%)	Notes
						Fill, Brown Silty Sand and Gravel, with Asphalt, Moist 1.01 (843.99)	SM							8	
1 SS	12	4 4 5	9			Fill, Brown and Black Lean Clay with Sand and Gravel, Moist 3 (842)	CL			3.75				13	
						Buried Topsoil, Black Lean Clay, Moist 5.5 (839.5)	OL							31	Organic Content = 8.1%
2 SS	10	3 4 4	8		5 840	Gray Lean Clay, with Brown Mottling, Very Moist 8 (837)	CL			1.0	1.15			32	
3 SS	10	4 3 4	7			Gray Sandy Lean Clay with Sand Seams, with Gravel, Very Moist 10.5 (834.5)	CL							17	
4 SS	5	2 3 6	9		10 835	Gray Lean Clay, Trace Sand and Gravel, with Fine Sand Lenses, Very Moist to Moist				2.0	1.24			16	
5 SS	17	3 3 3	6												
6 SS	15	4 5 5	10		15 830					3.0	3.30			17	
							CL								
7 SS	10	3 5 4	9		20 825					2.75	2.47			16	

End of Boring at 20.0 ft.

WATER & CAVE-IN OBSERVATION DATA

	WATER ENCOUNTERED DURING DRILLING: NE		CAVE DEPTH AT COMPLETION: 14.5ft.	WET <input type="checkbox"/>
	WATER LEVEL AT COMPLETION: 12ft.		CAVE DEPTH AFTER 0 HOURS: N/A	WET <input type="checkbox"/>
	WATER LEVEL AFTER 0 HOURS: N/A		NE = Not Encountered; NMR = No Measurement Recorded	WET <input type="checkbox"/>

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

WAUKESHA WATER UTILITY
WAUKESHA, WISCONSIN

Great Water Alliance
Contract Package 6 Return Flow Pipeline, 18-Inch Sanitary Sewer, and Outfall Facilities

Addendum No. 2, Attachment No. 1

Greeley and Hansen LLC

1) GENERAL

- a) The Pre-Bid Conference for the above referenced project was held online at 1:30 PM on April 14, 2020. This attachment summarizes verbal comments from the Pre-Bid Conference.

2) INTRODUCTIONS

- a) Waukesha Water Utility is the Owner and was represented at the meeting by Dan Duchniak, General Manager, and Chris Walter, Technical Services Manager. Greeley and Hansen is the Program Manager and was represented at the meeting by Katie Richardson, Ryan Christopher, and Ted Bluver. Black & Veatch is the Construction Manager and was represented by Jim Cobb, Jeff Champion, and Matt Hayes.

3) OPENING REMARKS

- a) The Pre-Bid Conference is mandatory for those General Contractors bidding on the referenced project. Roll call was completed and a list of General Contractors in attendance is provided in Addendum No. 2.
- b) Bid Documents are available through QuestCDN, Project # 6923865.
- c) The Plan Holders List as of April 17, 2020, will be sent to all Plan Holders with Addendum No. 2.

4) Contract Documents

- a) Key Contract Documents for the Bidder were reviewed and included the following Specification Sections:
 - i) 00 11 13 – Notice to Bidders
 - ii) 00 21 13 – Instructions to Bidders
 - iii) 00 41 00 – Bid Form
 - iv) 00 45 49 – Use of American Iron and Steel Requirement Tax Exemption
 - v) 00 52 00 – Agreement
 - vi) 00 72 00 – General Conditions
 - vii) 00 73 00 – Supplementary Conditions
 - viii) 00 73 39 – DBE and Local Business Participation
 - ix) 00 82 30 – Non-Segregated Facilities

- x) 00 82 40 – Nondiscrimination in Employment
- xi) 00 82 50 – Disadvantaged Business Enterprise (DBE) Participation

5) Overview of Work

- a) A brief project description was provided. Key project elements include approximately 11.27 miles of 30-inch ductile iron pipeline that includes open-cut construction, horizontal directional drilling, and jack and bore installation, and all valves, assemblies, and appurtenances for a complete installation. The project also includes the outfall facilities at the Root River and an 18-inch sanitary sewer in the City of Franklin.
- b) The Contractors were advised to review Specification Section 01 11 00 for project constraints.
- c) The easement information, geotechnical reports, environmental sampling, and other pertinent information is available as appendices to the specifications.

6) SPECIAL REQUIREMENTS

- a) The project will receive funding through the Wisconsin Department of Natural Resources and applicable requirements apply.
- f) Tax Exemption: Refer to Specification Section 00 21 13.
- g) Bonds and Insurance: Refer to the specifications.

7) GENERAL DISCUSSION/ CONTRACTOR'S QUESTIONS

- 1. Question: Does the Contractor have to bid Contract Package 5 to be able to bid the alternate in Contract Package 6?

Answer: No. Bidding the Contract Package 6 base bid and the alternate option and not Contract Package 5 is allowed.

- 2. Question: Will Contract Package 6 alternate option for a combined Contract Package 5 and 6 combined bid undermine a potential low bidder on Contract Package 5 if Contract Package 5 bids are open prior to Contract Package 6?

Answer: Contract Package 5, Addendum No. 3 has been issued to address your question.

- 3. Question: Please state the two addresses for unrecorded easements?

Answer: The addresses for the two easements that are yet to be recorded are in Specification Section 01 11 00 Summary of Work, Paragraph 1.6.D and are as follows: 10925 W. Ryan Road and 5733 W. Oakwood Road in the City of Franklin.

- 4. Question: Can the road be closed for construction on 60th Street in the City of Franklin.

Answer: Yes, portions of 60th Street can be closed as shown in the maintenance of traffic drawings. There is a City of Franklin Fire Station along 60th Street as well as the Franklin Industrial Park that needs access at all times.

5. Question: Note 1 on Drawing C122 states that if asphalt is disturbed then restore road to median. Is the asphalt restoration covered in the asphalt bid item or is it incidental?

Answer: The asphalt restoration being referenced by Note 1 on Drawing C122 is incidental. Contract Package 6, Addendum No. 2 addresses your question.

6. Question: Specification Section 00 82 50: MBE percentage is 8%, but DBE percentage is 10%, which percentage is correct?

Answer: The correct percentage is 10% for DBE requirements. The fair share percentages of 8% for MBEs and 8% for WBEs from Specification Section 00 82 50 are federal requirements. Per 40 CFR 33, the fair share objectives are not quotas.

7. Question: The design for the 18" sanitary sewer in the City of Franklin is too close to the overhead power lines to install safely and does not have borings to adequate depths. Would Greeley and Hansen consider redesigned the sanitary sewer alignment?

Answer: The Base Bid shall be as shown in the contract documents. The contractor has the ability to propose an alternative per Specification Section 00 41 00, Page 00 41 00-34, Bid Alternative No. 2.

8. Question: Will the Contract Package 6 alternate option for a combined Contract Package 5 and 6 bid put stress on local businesses who may not be able to financially afford to bid Contract Package 6 bid alternate?

Answer: Contract Package 5, Addendum No. 3 has been issued to address your question.

DISCLAIMER: The notes presented herein are intended to be explanatory in nature and do not supersede requirements presented in the contract documents. Only changes made by addendum to the contract documents will be binding.

Attachments: PowerPoint Presentation from Pre-bid Conference



Contract Package 6 Return Flow Pipeline, 18-Inch Sanitary Sewer, and Outfall Facilities

MANDATORY PRE-BID CONFERENCE

APRIL 14, 2020



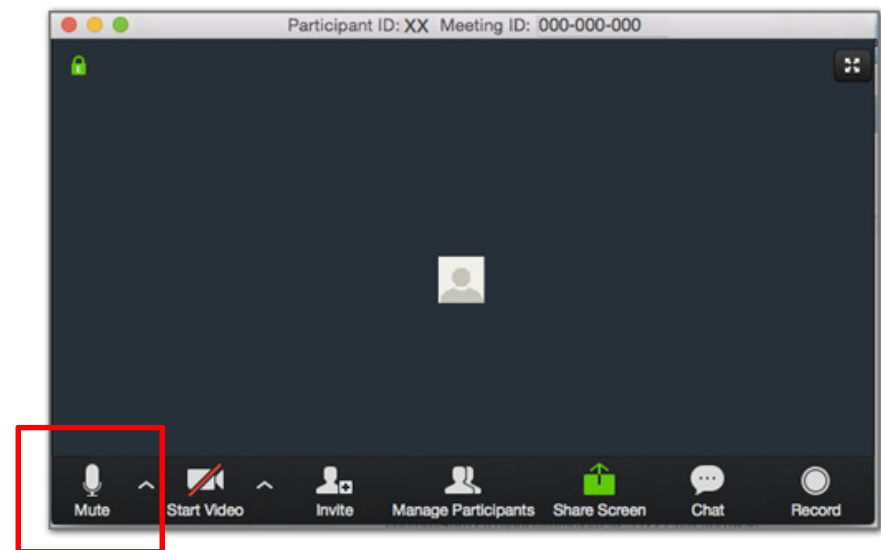
Agenda

- I. Introductions and Team Organization
- II. Opening Remarks
- III. Contract Documents
- IV. Overview of Work
- V. General Discussion/Contractor Questions
- VI. Closing Remarks



I. Introductions and Team Organization

- Lines will be muted during presentation
- Please use the “Raise Hand” function during Q&A and your line will be unmuted



CRV1
CRV2

Slide 3

CRV1 Need the raise hand icon shown instead as lines will be automatically muted as they come in and we will be controlling it.

Richardson, Catharine, 4/13/2020

CRV2 need to think about how this will work during roll call

Richardson, Catharine, 4/13/2020



II. Opening Remarks

- Comments from WWU General Manager, Dan Duchniak
- Pre-bid Conference Sign-in Sheet and Roll Call
- Availability of Contract Documents
- Bidders are required to be prequalified
- General and first-tier subcontractors prequalified are listed in the Great Water Alliance website (<http://greatwateralliance.com/contractors/>)



III. Contract Documents



Section 00 11 13 Notice to Bidders

- Bids will be received electronically via www.QuestCDN.com
- May 14, 2020 at 10:00 AM
- Contract Package 5 and Contract Package 6 Alternate Bid



Section 00 21 13 Instructions to Bidders

- Prequalification Requirements
- Interpretation and Addenda
 - Questions in writing via email to gwa@greeley-hansen.com
 - Last day for questions is ten (10) days before the bid opening date
 - Answers and interpretation to questions will be issued through QuestCDN seven (7) days before the bid opening date
- Bid Security
- Preparation of Bid



Section 00 21 13 Instructions to Bidders

- Submittal of Bid
- Withdrawal of Bids
- Bid Opening
- Tax Exemption
- Wisconsin Department of Natural Resources (WDNR) Loan Program related Procurement requirements
- Bidder's Checklist



III. Contract Documents

- Section 00 41 00 Bid Form
 - Non-Discrimination in Employment
 - Federal Lobbying Restrictions
 - Alcohol and Drug free Workplace
 - Davis Bacon Act Wage Rules
 - Alternate to Base Bid
 - Subcontracted Work Form
- Section 00 45 49 Use of American Iron and Steel Requirement Tax Exemption



Section 00 52 00 Agreement

- General
- Contract Times
- Complete pipe installation within the Sunset Bank Easement – 35 consecutive days
- Substantial Completion – 660 consecutive days
- Final Completion – 720 consecutive days
- Liquidated Damages
 - \$3,700 per day after the time specified for Substantial Completion
 - \$3,500 per day after the time specified for completion and readiness for final payment
 - \$4,000 per day after August 31, 2023



III. Contract Documents

- Section 00 72 00 General Conditions
- Section 00 73 00 Supplementary Conditions
- Section 00 73 39 DBE and Local Business Participation
 - DBE requirements – 10%
 - Local business requirement – 30%
- Section 00 82 30 Non-Segregated Facilities
- Section 00 82 40 Nondiscrimination in Employment



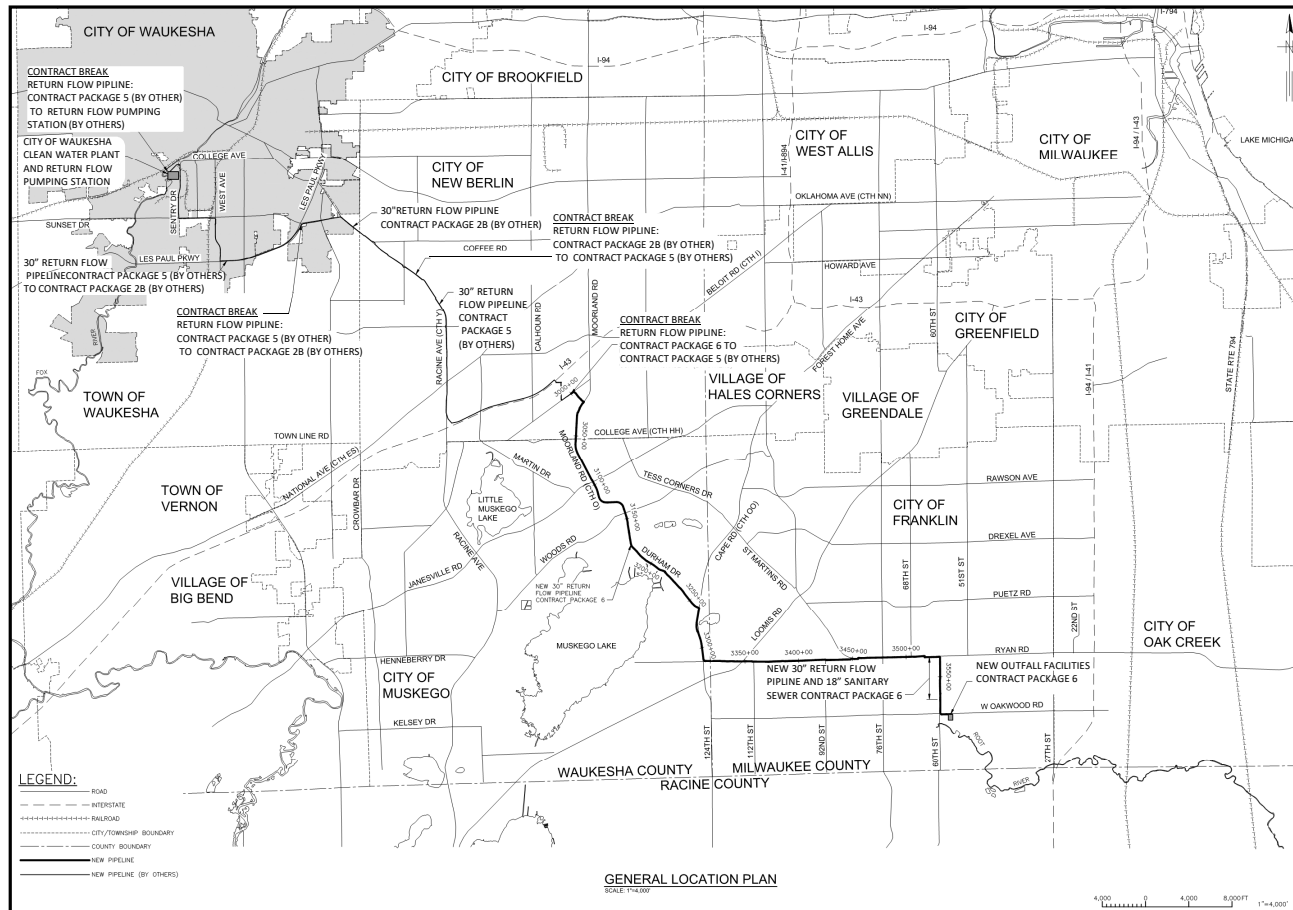
Section 00 82 50 DBE Participation

- Funding Agencies Rules
 - Environmental Protection Agency (EPA) Water Infrastructure Finance and Innovation Act (WIFIA) program
 - WDNR Clean Water Funding Program (CWFP)
- Pre-contract Award Obligations
- Evaluation of DBE Utilization and Good Faith Efforts

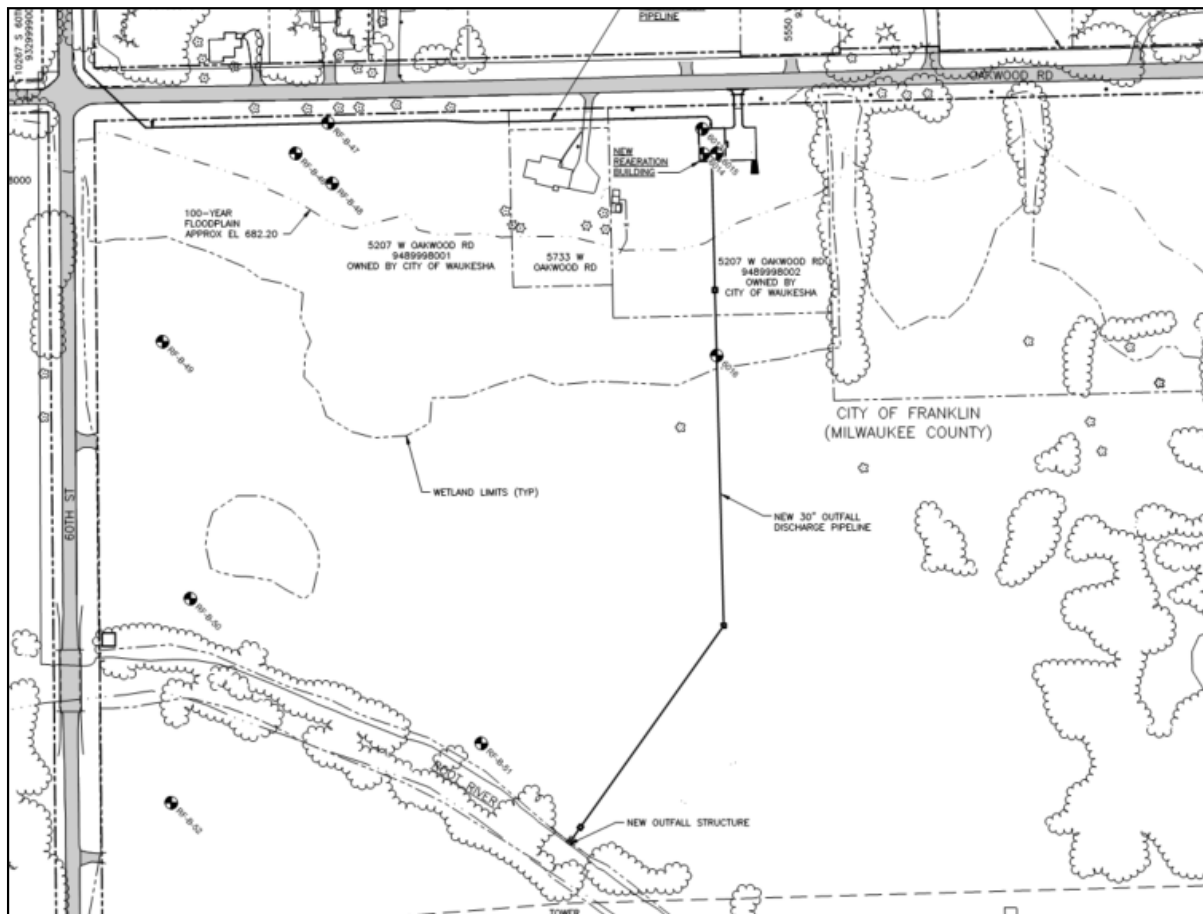


IV. Overview of Work

Overview of Contract Package 6



Overview of Contract Package 6





IV. Overview of Work

- Section 01 11 00 – Summary of Work
- Project Constraints
- Suggested Work Sequence
- Permits
 - Local
 - State
 - Federal



IV. Overview of Work

- Easements
- Maintain Access to Properties
- Geotechnical Report
- Road Crossings
- Wetlands, Floodplains, Floodways
- Leakage Testing



V. General Discussion/Contractor Questions

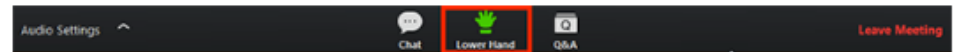
Raise hand to ask a question.

Windows | Mac

1. Click **Raise Hand** in the Webinar Controls.



2. The host will be notified that you've raised your hand.
3. Click **Lower Hand** to lower it if needed.



Note:

- **Windows:** You can also use the **Alt+Y** keyboard shortcut to raise or lower your hand.
- **Mac:** You can also use the **Option+Y** keyboard shortcut to raise or lower your hand.



VI. Closing Remarks

- A written report of the meeting minutes from today's meeting, including attendance sheets, will be provided as part of an addendum.

Thank you